

forwarding the new data packet to the one network switch port for transfer to the router, based on a determined absence of the layer 3 destination addresses stored by the switching module.

7. The method of claim 1, wherein the disabling step includes:

receiving a data packet by a second of the network switch ports connected to a subnetwork, the data packet having a source media access control (MAC) address, a destination MAC address, a source Internet Protocol (IP) address, and a destination IP address;

5 learning the source MAC address and a destination MAC address of the received data packet by the switching module;

determining that the one switch port has a learning bit disabled; and

disabling learning of the destination IP address of the received data packet based on the determination that the corresponding one switch port has the corresponding learning bit disabled.

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8. The method of claim 1, wherein the disabling step includes:

receiving a data packet by the identified one network switch port from the router, the data packet having a source media access control (MAC) address, a destination MAC address, a source Internet Protocol (IP) address, and a destination IP address; and

5 disabling learning of any of the source IP address and a destination IP address based on having received the data packet by the identified one network switch port.

9. A network switch system comprising:

an integrated network switch having a plurality of network switch ports and a switching module, the switching module configured for learning layer 2 and layer 3 network addresses of received data packets, wherein one of the network switch ports is configured for transferring data packets between the integrated network switch and a router; and

5 a host controller configured for disabling learning of the layer 2 and layer 3 network addresses of any of the data packets transferred by the one network switch port, based on determining that the one network switch port transfers the data packets between the integrated network switch and the router.

10. The system of claim 9, wherein the switching module includes an address table configured for storing, for each network node connected to the network switch, a media access control (MAC) address, an Internet Protocol (IP) address, a virtual local area network (VLAN) identifier, and an identifier for one of the network switch ports connected to the corresponding network node.

11. The system of claim 9, wherein the host controller resets a learning bit for the one network switch port, the switching module disabling the learning of the data packets received by the one network switch port in response to detecting the learning bit reset for the one network switch port.